

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims

1. (Currently Amended) A method for performing discontinuous transmission (DTX) in an adaptive multi-rate (AMR) communications system in which source data is channel encoded and interleaved for transmission from a first component in the system to a second component in the system, the method comprising the steps of:

detecting by the first component in the AMR communications system, periods of source data inactivity; and

transmitting silence descriptor (SID) frames from the first to the second component during the periods of source data inactivity, wherein the SID frames include comprise codec mode information; and

wherein source data frames are block diagonally interleaved and certain of the SID frames are block interleaved ~~using a different interleaving algorithm as compared to that used for the channel encoded source data.~~

2. (Canceled)

3. (Currently Amended) The method of claim 1, wherein the SID frames ~~include~~ comprise comfort noise (CN) parameters.

4. (Currently Amended) The method of claim 1, wherein the step of transmitting silence descriptor (SID) frames ~~includes~~ comprises the steps of:

transmitting a first type of SID frame to indicate a transition from source data activity to source data inactivity;

periodically transmitting a second type of SID frame during source data inactivity;
and

transmitting a third type of SID frame to indicate a transition from source data inactivity to source data activity.

5. (Canceled)

6. (Currently Amended) The method of claim 1, wherein each SID frame includes comprises a bit pattern for identifying the SID frame as a particular type of SID frame.

7. (Original) The method of claim 6, wherein the bit patterns are gross bit patterns.

8. (Original) The method of claim 1, wherein the source data is speech, and wherein the communications system is one of a Time Division Multiple Access (TDMA) wireless system, a Frequency Division Multiple Access (FDMA) wireless system, and a Code Division Multiple Access (CDMA) wireless system.

9. (Original) The method of claim 1, wherein escape frames are transmitted to effect configuration changes, and wherein an escape frame can replace a source data frame, a SID frame, or a no-transmission (NoTX) frame.

10. (Currently Amended) The method of claim 9, wherein ~~SID frames are block interleaved, and wherein~~ escape frames are block diagonally interleaved.

11. (Currently Amended) The method of claim 9, wherein an the escape frame is used to change an active codec set.

12. (Currently Amended) The method of claim 9, wherein an the escape frame is used to change a phase of codec mode information.

13. (Currently Amended) ~~The method of claim 1,~~ A method for performing discontinuous transmission (DTX) in an adaptive multi-rate (AMR) communications system in which source data is channel encoded and interleaved for transmission from a first component in the system to a second component in the system, the method comprising the steps of:

detecting by the first component, periods of source data inactivity; and transmitting silence descriptor (SID) frames from the first to the second component during the periods of source data inactivity, wherein the SID frames include codec mode information;

wherein certain of the SID frames are interleaved using a different interleaving algorithm as compared to that used for the channel encoded source data;

wherein active speech source data is block diagonally interleaved, and wherein unused bits within the interleaving scheme for a last speech frame are used for a specific bit pattern to mark end of speech, and wherein unused bits within the interleaving scheme for a first frame are used for a specific bit pattern to mark beginning of speech.

14-15. (Canceled)

16. (Currently Amended) A method for effecting configuration changes in an adaptive multi-rate (AMR) communications system in which source data is transmitted from a first component to a second component, said method comprising the step of:

transmitting by the first component in the AMR communications system, an escape frame in place of a source data frame to indicate a configuration change to the second component, the escape frame including comprising codec mode information and a gross bit pattern to distinguish the escape frame from speech source data frames.

17. (Currently Amended) The method of claim 16, wherein the escape frame further ~~includes~~ comprises a data field to indicate to the second component a particular configuration change to be made.

18. (Previously Presented) The method of claim 16, wherein the escape frame is used to change an active codec set.

19. (Previously Presented) The method of claim 16, wherein the escape frame is used to change a phase of codec mode information.

20. (Currently Amended) The method of claim 16, further comprising the step of:

transmitting silence descriptor (SID) frames from the first to the second component during periods of source data inactivity,

wherein the first component selectively transmits an the escape frame to replace a the source data frame, a SID frame, or a no transmission (NoTX) frame.

21-22. (Canceled)

23. (Currently Amended) The method of claim 20, wherein the step of transmitting SID frames ~~includes~~ comprises the steps of:

transmitting a first type of SID frame to indicate a transition from source data activity to source data inactivity;

periodically transmitting a second type of SID frame during source data inactivity;

and

transmitting a third type of SID frame to indicate a transition from source data inactivity to source data activity.

24. (Canceled)

25. (Currently Amended) A transmission component for transmitting channel encoded and interleaved source data frames to a receiving component in an adaptive multi-rate (AMR) communications system, said transmission component comprising:

means for detecting periods of source data inactivity; and

means for transmitting interleaved silence descriptor (SID) frames to the receiving component in the AMR communications system during the periods of source data inactivity, wherein the SID frames ~~include~~ comprise codec mode information; and

wherein at least some of the SID frames are block interleaved ~~using a different interleaving algorithm as compared to that used for~~ while the channel encoded source data frames are block diagonally interleaved.

26. (Canceled)

27. (Currently Amended) A transmission component for transmitting source data frames to a receiving component in an adaptive multi-rate (AMR) communications system, said transmission component comprising:

means for transmitting an escape frame in place of a source data frame to indicate a configuration change to the receiving component in the AMR communications system, wherein the escape frame ~~includes~~ comprises codec mode information and a gross bit pattern to distinguish the escape frame from source data frames.

28. (Currently Amended) The transmission component of claim 27, wherein the escape frame further ~~includes~~ comprises a data field to indicate to the second component a particular configuration change to be made.

29. (Currently Amended) The transmission component of claim 27, wherein the codec mode information ~~includes~~ comprises a codec mode indication that indicates a presently applied codec mode.

30. (Currently Amended) The transmission component of claim 27, wherein the codec mode information ~~includes~~ comprises one of:

a codec mode command that indicates a codec mode to be used for transmission from the receiving component to the transmission component; and

a codec mode request that indicates a codec mode that is preferred for transmission from the receiving component to the transmission component.

31. (Currently Amended) The method of claim 16, wherein the codec mode information ~~includes~~ comprises a codec mode indication that indicates a presently applied codec mode.

32. (Currently Amended) The method of claim 16, wherein the codec mode information ~~includes~~ comprises one of:

a codec mode command that indicates a codec mode to be used for transmission from the second component to the first component; and

a codec mode request that indicates a codec mode that is preferred for transmission from the second component to the first component.

33. (Currently Amended) The method of claim 20, wherein when the escape frame replaces the SID frame, the method ~~includes~~ comprises rescheduling the SID frame for transmission following transmission of the escape frame.

34. (Currently Amended) The method of claim 23, wherein the step of transmitting an escape frame ~~includes~~ comprises:

filling a first set of otherwise unused bits with a bit pattern indicating the third type of SID frame in order to ensure detection of a transition from source data inactivity to source data activity; and

filling a second set of otherwise unused bits with a bit pattern indicating the first type of SID frame if source data inactivity continues.

35. (New) The method of claim 20, wherein source data frames and escape frames are block diagonally interleaved and wherein certain of the transmitted SID frames are block interleaved.

36. (New) The transmission component of claim 27, further comprising:
means for transmitting silence descriptor (SID) frames from to the receiving component during periods of source data inactivity; and

wherein said means for transmitting an escape frame further comprises means for selectively transmitting the escape frame to replace the source data frame, a SID frame, or a no transmission (NoTX) frame.

37. (New) The method of claim 36, wherein source data frames and escape frames are block diagonally interleaved and wherein certain of the transmitted SID frames are block interleaved.